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			ART UNIT	PAPER NUMBER
			2629	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docket-oppedahl@oppedahl.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/528,512	<b>Applicant(s)</b> MARTEN, VICTOR	
	<b>Examiner</b> PRABODH M. DHARIA	<b>Art Unit</b> 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 9-30 is/are pending in the application.
- 4a) Of the above claim(s) 8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 9-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 June 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

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1. **Status:** Please all replies and correspondence should be addressed to examiner's new art unit 2629. Receipt is acknowledged of papers submitted on 08-28-2008 under request for reconsideration, which have been placed of record in the file. Claims 1-7 and 9-30 are pending. Claim 8 is cancelled.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 1, 4-7, 9-19 and 23-30 rejected under 35 U.S.C. 103(a) as being unpatentable over Owens (5,953,199) in view of Yoshida et al. (4,071,785).

Regarding Claim 1, Owens (5,953,199) discloses a capacitive touch pad (Col. 2, Line 54, Col. 1, Line 60) comprising cover (Col. 2, line 61) and first layers, the cover layer comprising a non-conductive cover providing galvanic isolation of the first layer (Col. 2, Lines 61-65, Col. 3, lines 8-18).

However, Owens (5,953,199) fails to disclose the first layer comprising a plurality of row-shaped row-sensing electrodes and a row-by-column array of column-sensing electrodes each column of column-sensing electrodes interconnected by conductive traces, the row-sensing electrodes and column-sensing electrodes defining interleaved combs there between, each comb comprising at least two fingers.

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However, Yoshida et al. (4,071,785) the first layer (see abstract) comprising a plurality of row-shaped row-sensing electrodes and a row-by-column array of column-sensing electrodes (Col. 3, Lines 4-12 please see figure 1 the piezoelectric material are well known to one ordinary skill in the art as transducer or sensor for touch pad sensors; so the electrodes formed on the piezoelectric films are sensing electrodes) each column of column-sensing electrodes interconnected by conductive traces, the row-sensing electrodes and column-sensing electrodes (please see figure 2,3,8, Col. 3, Lines 1-54, piezoelectric material are well known to one ordinary skill in the art as transducer or sensor for touch pad sensors; so the electrodes formed on the piezoelectric films are sensing electrodes) defining interleaved combs there between, each comb comprising at least two fingers (figure 8, shows the interleaved combs shape with fingers see figures 2 and 3, Col. 3, Lines 18-30, Col. 2, Lines 3-10).

The reason to combine is to have piezoelectric film having side operating electrodes forming interleaved column and row sensing electrode in the comb shaped with at least two fingers with reduction of the operating point or contact point and having ground electrode on the second layer protecting against electrically noisy environments.

Thus it is obvious to one in the ordinary skill in the art at the time of invention was made to incorporate teaching of Yoshida et al. (4,071,785) in teaching of Owens (5,953,199) to able to have a matrix touch panel with piezoelectric film having side operating electrodes forming interleaved column and row sensing electrode in the comb shaped with at least two finger with reduction of the operating point or contact point and having ground electrode on the second layer protecting against electrically noisy environments.

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Regarding Claim 4, Yoshida et al. (4,071,785) discloses a second layer, the first layer lying between the cover and second layers, the second layer comprising a ground plane (Col. 3, Lines 1-30 figures 1-4).

Regarding Claim 5, Yoshida et al. (4,071,785) discloses a third layer, the second layer lying between the first and third layers, the third layer bearing circuitry (please see figures 1-8, Col. 3, Lines 1-46).

Regarding Claim 6, Yoshida et al. (4,071,785) discloses in the first layer further comprises annular copper around the electrodes (item #12 figure 5, Col. 3, Lines 1-45, Col. 5, Lines 4-27 it is well known one ordinary skill in the art to have annular copper around ad metal to prevent cross talk or between conductor, as well as reduce electrically noisy environment of the ground plane of the PC board please see prior art of Berstis et al. Col. # 7, Lines 51-59, Col. 8, Line 65 to Col. 9, Line 15, Welbon et al. (US 7,131,047 B2) Col. 5, Line 44 to Col. 7, Line 10).

Regarding Claim 7, Yoshida et al. (4,071,785) discloses the annular copper is connected to ground potential (item #12 figure 5, item #12 figure 5, Col. 3, Lines 1-45, Col. 5, Lines 4-27, it is well known one ordinary skill in the art to have annular copper around ad metal to prevent cross talk or between conductor, as well as reduce electrically noisy environment of the ground plane of the PC board please see prior art of Berstis et al. Col. # 7, Lines 51-59, Col. 8, Line 65 to Col. 9, Line 15, Welbon et al. (US 7,131,047 B2) Col. 5, Line 44 to Col. 7, Line 10).

Regarding Claim 9, Owens (5,953,199) discloses an isolator/dielectric layer between the first and second layers (Col. 2, Lines 61-65, Col. 3, lines 8-18).

Yoshida et al. (4,071,785) discloses the metallization layer to protect from environment is provided between first and second layer (Col. 5, Lines 12-30, Col. 4, lines 11-29, Col. 3, Lines 38-54).

Regarding Claim 10, Owens (5,953,199) discloses an isolator/dielectric layer between the second and third layers (Col. 2, Lines 61-65, Col. 3, lines 8-18).

Yoshida et al. (4,071,785) discloses the metallization layer to protect from environment is provided between first and second layer (Col. 5, Lines 12-30, Col. 4, lines 11-29, Col. 3, Lines 38-54).

Regarding Claim 11, Yoshida et al. (4,071,785) discloses the number of rows is at least three and the number of columns is at least three (Col. 3, Lines 1-30, Col. 2, Lines 3-10).

Regarding Claim 12, Yoshida et al. (4,071,785) discloses the number of rows is at least eleven and the number of columns is at least thirteen (Col. 3, Lines 1-30, Col. 2, Lines 3-10).

Regarding Claim 13, Owens (5,953,199) discloses a capacitive touch pad (Col. 2, Line 54, Col. 1, Line 60) comprising cover (Col. 2, line 61) and first layers, the cover layer

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comprising a non-conductive cover providing galvanic isolation of the first layer (Col. 2, Lines 61-65, Col. 3, lines 8-18).

However, Owens (5,953,199) fails to disclose the first layer comprising a plurality of row-shaped row-sensing electrodes and a row-by-column array of column-sensing electrodes each column of column-sensing electrodes interconnected by conductive traces, the row-sensing electrodes and column-sensing electrodes defining interleaved combs there between, each comb comprising at least two fingers and the touch pad further comprising a second layer, the first layer lying between the cover and second layers, the second layer comprising a ground plane.

Yoshida et al. (4,071,785) the first layer (see abstract) comprising a plurality of row-shaped row-sensing electrodes and a row-by-column array of column-sensing electrodes (Col. 3, Lines 4-12 please see figure 1 the piezoelectric material are well known to one ordinary skill in the art as transducer or sensor for touch pad sensors; so the electrodes formed on the piezoelectric films are sensing electrodes) each column of column-sensing electrodes interconnected by conductive traces, the row-sensing electrodes and column-sensing electrodes (please see figure 2,3,8, Col. 3, Lines 1-54, piezoelectric material are well known to one ordinary skill in the art as transducer or sensor for touch pad sensors; so the electrodes formed on the piezoelectric films are sensing electrodes) defining interleaved combs there between, each comb comprising at least two fingers (figure 8, shows the interleaved combs shape with fingers see figures 2 and 3, Col. 3, Lines 18-30, Col. 2, Lines 3-10) and the touch pad further comprising a second layer, the first layer lying between the cover and second layers, the second layer comprising a ground plane (Col. 3, Lines 1-54, please see figures 1-4).

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The reason to combine is to have piezoelectric film having side operating electrodes forming interleaved column and row sensing electrode in the comb shaped with at least two fingers with reduction of the operating point or contact point and having ground electrode on the second layer protecting against electrically noisy environments.

Thus it is obvious to one in the ordinary skill in the art at the time of invention was made to incorporate teaching of Yoshida et al. (4,071,785) in teaching of Owens (5,953,199) to able to have a matrix touch panel with piezoelectric film having side operating electrodes forming interleaved column and row sensing electrode in the comb shaped with at least two finger with reduction of the operating point or contact point and having ground electrode on the second layer protecting against electrically noisy environments.

Regarding Claim 14, Yoshida et al. (4,071,785) discloses a third layer, the second layer lying between the first and third layers, the third layer bearing circuitry (please see figures 1-8, Col. 3, Lines 1-46).

Regarding Claim 15, Owens (5,953,199) discloses a capacitive touch pad (Col. 2, Line 54, Col. 1, Line 60) comprising cover (Col. 2, line 61) and first layers, the cover layer comprising a non-conductive cover providing galvanic isolation of the first layer (Col. 2, Lines 61-65, Col. 3, lines 8-18).

However, Owens (5,953,199) fails to disclose the first layer comprising a plurality of row-shaped row-sensing electrodes and a row-by-column array of column-sensing electrodes each column of column-sensing electrodes interconnected by conductive traces, the row-sensing



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electrodes and column-sensing electrodes defining interleaved combs there between, each comb comprising at least two fingers and the touch pad further comprising the first layer further comprises annular copper around the electrodes.

However, Yoshida et al. (4,071,785) the first layer (see abstract) comprising a plurality of row-shaped row-sensing electrodes and a row-by-column array of column-sensing electrodes (Col. 3, Lines 4-12 please see figure 1 the piezoelectric material are well known to one ordinary skill in the art as transducer or sensor for touch pad sensors; so the electrodes formed on the piezoelectric films are sensing electrodes) each column of column-sensing electrodes interconnected by conductive traces, the row-sensing electrodes and column-sensing electrodes (please see figure 2,3,8, Col. 3, Lines 1-30, piezoelectric material are well known to one ordinary skill in the art as transducer or sensor for touch pad sensors; so the electrodes formed on the piezoelectric films are sensing electrodes) defining interleaved combs there between, each comb comprising at least two fingers and further the first layer further comprises annular copper around the electrodes (figure 8, shows the interleaved combs shape with fingers see figures 2 and 3, Col. 3, Lines 18-54, Col. 2, Lines 3-10) and (item #12 figure 5, item #12 figure 5, Col. 3, Lines 1-45, Col. 5, Lines 4-27, it is well known one ordinary skill in the art to have annular copper around ad metal to prevent cross talk or between conductor, as well as reduce electrically noisy environment of the ground plane of the PC board please see prior art of Berstis et al. Col. # 7, Lines 51-59, Col. 8, Line 65 to Col. 9, Line 15, Welbon et al. (US 7,131,047 B2) Col. 5, Line 44 to Col. 7, Line 10).

The reason to combine is to have piezoelectric film having side operating electrodes forming interleaved column and row sensing electrode in the comb shaped with at least two

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fingers with reduction of the operating point or contact point and having ground electrode on the second layer protecting against electrically noisy environments.

Thus it is obvious to one in the ordinary skill in the art at the time of invention was made to incorporate teaching of Yoshida et al. (4,071,785) in teaching of Owens (5,953,199) to able to have a matrix touch panel with piezoelectric film having side operating electrodes forming interleaved column and row sensing electrode in the comb shaped with at least two finger with reduction of the operating point or contact point and having ground electrode on the second layer protecting against electrically noisy environments.

Regarding Claim 16, Yoshida et al. (4,071,785) discloses the annular copper is connected to ground potential (figure 8, shows the interleaved combs shape with fingers see figures 2 and 3, Col. 3, Lines 18-30, Col. 2, Lines 3-10) and (item #12 figure 5, item #12 figure 5, Col. 3, Lines 1-45, Col. 5, Lines 4-27, it is well known one ordinary skill in the art to have annular copper around ad metal to prevent cross talk or between conductor, as well as reduce electrically noisy environment of the ground plane of the PC board please see prior art of Berstis et al. Col. # 7, Lines 51-59, Col. 8, Line 65 to Col. 9, Line 15, Welbon et al. (US 7,131,047 B2) Col. 5, Line 44 to Col. 7, Line 10).

Regarding Claim 17, Owens (5,953,199) discloses an isolator/dielectric layer between the first and second layers (Col. 2, Lines 61-65, Col. 3, lines 8-18).

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Yoshida et al. (4,071,785) discloses the metallization layer to protect from environment is provided between first and second layer (Col. 5, Lines 12-30, Col. 4, lines 11-29, Col. 3, Lines 38-54).

Regarding Claim 18, Owens (5,953,199) discloses an isolator/dielectric layer between the second and third layers (Col. 2, Lines 61-65, Col. 3, lines 8-18).

Yoshida et al. (4,071,785) discloses the metallization layer to protect from environment is provided between first and second layer (Col. 5, Lines 12-30, Col. 4, lines 11-29, Col. 3, Lines 38-54).

Regarding Claim 19, Owens (5,953,199) discloses a capacitive touch pad (Col. 2, Line 54, Col. 1, Line 60) comprising cover (Col. 2, line 61) and first layers, the cover layer comprising a non-conductive cover providing galvanic isolation of the first layer (Col. 2, Lines 61-65, Col. 3, lines 8-18).

However, Owens (5,953,199) fails to disclose the touch pad defining top, bottom, left, and right edges, the pad comprising cover and the first layer comprising a plurality of row-shaped row-sensing electrodes and a row-by-column array of column-sensing electrodes each column of column-sensing electrodes interconnected by conductive traces, the row-sensing electrodes and column-sensing electrodes defining interleaved combs there between, each comb comprising at least two fingers and at least one regular row-shaped row-sensing electrode having fingers extending toward the top edge and having fingers extending toward the bottom edge, at

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least one row of column-sensing electrodes having fingers extending toward the top edge and having fingers extending toward the bottom edge.

However, Yoshida et al. (4,071,785) the touch pad defining top, bottom, left, and right edges, the pad comprising a layer (please see figures 1 and 2 item # 7X1 and 7Y1, Col. 3, Lines 1-45) and the first layer (see abstract) comprising a plurality of row-shaped row-sensing electrodes and a row-by-column array of column-sensing electrodes (Col. 3, Lines 4-12 please see figure 1 the piezoelectric material are well known to one ordinary skill in the art as transducer or sensor for touch pad sensors; so the electrodes formed on the piezoelectric films are sensing electrodes) each column of column-sensing electrodes interconnected by conductive traces, the row-sensing electrodes and column-sensing electrodes (please see figure 2,3,8, Col. 3, Lines 1-30, piezoelectric material are well known to one ordinary skill in the art as transducer or sensor for touch pad sensors; so the electrodes formed on the piezoelectric films are sensing electrodes) defining interleaved combs there between, each comb comprising at least two fingers (figure 8, shows the interleaved combs shape with fingers see figures 2 and 3, Col. 3, Lines 18-30, Col. 2, Lines 3-10) and at least one regular row-shaped row-sensing electrode having fingers extending toward the top edge and having fingers extending toward the bottom edge, at least one row of column-sensing electrodes having fingers extending toward the top edge and having fingers extending toward the bottom edge (please see figures 1 and 2, Col. 3, lines 1-45, it would be obvious to one ordinary skill in the art extend the finger to connect to pads of PC board per design requirements Yoshida et al. (4,071,785) chooses to have them on the sides and bottom).

The reason to combine is to have piezoelectric film having side operating electrodes forming interleaved column and row sensing electrode in the comb shaped with at least two

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fingers with reduction of the operating point or contact point and having ground electrode on the second layer protecting against electrically noisy environments.

Thus it is obvious to one in the ordinary skill in the art at the time of invention was made to incorporate teaching of Yoshida et al. (4,071,785) in teaching of Owens (5,953,199) to able to have a matrix touch panel with piezoelectric film having side operating electrodes forming interleaved column and row sensing electrode in the comb shaped with at least two finger with reduction of the operating point or contact point and having ground electrode on the second layer protecting against electrically noisy environments.

Regarding Claim 22, Yoshida et al. (4,071,785) discloses a second layer, the first layer lying between the cover and second layers, the second layer comprising a ground plane (Col. 3, Lines 1-30 figures 1-4).

Regarding Claim 23, Yoshida et al. (4,071,785) discloses a third layer, the second layer lying between the first and third layers, the third layer bearing circuitry (please see figures 1-8, Col. 3, Lines 1-46).

Regarding Claim 24, Yoshida et al. (4,071,785) discloses in the first layer further comprises annular copper around the electrodes (item #12 figure 5, Col. 3, Lines 1-45, Col. 5, Lines 4-27 it is well known one ordinary skill in the art to have annular copper around ad metal to prevent cross talk or between conductor, as well as reduce electrically noisy environment of the ground plane of the PC board please see prior art of Berstis et al. Col. # 7, Lines 51-59, Col.

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8, Line 65 to Col. 9, Line 15, Welbon et al. (US 7,131,047 B2) Col. 5, Line 44 to Col. 7, Line 10).

Regarding Claim 25, Yoshida et al. (4,071,785) discloses the annular copper is connected to ground potential (item #12 figure 5, item #12 figure 5, Col. 3, Lines 1-45, Col. 5, Lines 4-27, it is well known one ordinary skill in the art to have annular copper around ad metal to prevent cross talk or between conductor, as well as reduce electrically noisy environment of the ground plane of the PC board please see prior art of Berstis et al. Col. # 7, Lines 51-59, Col. 8, Line 65 to Col. 9, Line 15, Welbon et al. (US 7,131,047 B2) Col. 5, Line 44 to Col. 7, Line 10).

Regarding Claim 26, Owens (5,953,199) discloses an isolator/dielectric layer between the first and second layers (Col. 2, Lines 61-65, Col. 3, lines 8-18).

Yoshida et al. (4,071,785) discloses the metallization layer to protect from environment is provided between first and second layer (Col. 5, Lines 12-30, Col. 4, lines 11-29, Col. 3, Lines 38-54).

Regarding Claim 27, Owens (5,953,199) discloses an isolator/dielectric layer between the second and third layers (Col. 2, Lines 61-65, Col. 3, lines 8-18).

Yoshida et al. (4,071,785) discloses the metallization layer to protect from environment is provided between first and second layer (Col. 5, Lines 12-30, Col. 4, lines 11-29, Col. 3, Lines 38-54).

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Regarding Claim 28, Yoshida et al. (4,071,785) discloses the number of rows is at least three and the number of columns is at least three (Col. 3, Lines 1-30, Col. 2, Lines 3-10).

Regarding Claim 29, Yoshida et al. (4,071,785) discloses the number of rows is at least eleven and the number of columns is at least thirteen (Col. 3, Lines 1-30, Col. 2, Lines 3-10).

Regarding Claim 30, Yoshida et al. (4,071,785) discloses each of the column-sensing electrodes has fingers extending toward the top edge and has fingers extending toward the bottom edge (please see figure 2, Col. 3, Lines 1-45, it would obvious to one ordinary skill in the art extend the finger to connect to pads of PC board per design requirements Yoshida et al. (4,071,785) chooses to have them on the sides and bottom).

4. Claims 2, 3, 20 and 21 rejected under 35 U.S.C. 103(a) as being unpatentable over Owens (5,953,199) in view of Yoshida et al. (4,071,785) as applied to claims 1, 4-7, 9-19, and 22-30 above, and further in view of Sano et al. (US 2003/0234773 A1).

Regarding Claims 2, 3, Yoshida et al. (4,071,785) the fingers are no wider than eight mils and the fingers define spaces there between, and the spaces are no wider than eight mils (Col. 5, Lines 5-29 discloses the thickness and distance also determines not only driving but also stress requirements of the piezoelectric films).

However, Yoshida et al. (4,071,785) fails to disclose or recite finger width.

However, Sano et al. (US 2003/0234773 A1) discloses or recites finger width pages 4, 5, paragraphs 56, 57 discloses the width spacing between fingers are variable set and the thickness

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depends on maximum excitations efficiency, there fore it would have been obvious to one ordinary skill in the art to have fingers or distance between fingers be no wider than 8 mils. The same inventor Sano et al. US 20060038792 A1 discloses finger and distance be about 75 to 100 microns pages 3 and 4, paragraphs 47-52).

The reason to combine proper width of the finger will match driving requirements of the column and row electrodes defining interleaved combs fingers; so that number of fingers required to connecting pads required will be reduced.

Thus it is obvious to one in the ordinary skill in the art at the time of invention was made to incorporate teaching of Sano et al. ((US 2003/0234773 A1) in teaching of Owens (5,953,199) modified by Yoshida et al. (4,071,785) to able to have a matrix touch panel proper width of the finger will match driving requirements of the column and row electrodes defining interleaved combs fingers; so that number of fingers required to connecting pads required will be reduced.

Regarding Claims 20 and 21 Yoshida et al. (4,071,785) the fingers are no wider than eight mils and the fingers define spaces there between, and the spaces are no wider than eight mils (Col. 5, Lines 5-29 discloses the thickness and distance also determines not only driving but also stress requirements of the piezoelectric films).

However, Yoshida et al. (4,071,785) fails to disclose or recite finger width.

However, Sano et al. (US 2003/0234773 A1) discloses or recites finger width pages 4, 5, paragraphs 56, 57 discloses the width spacing between fingers are variable set and the thickness depends on maximum excitations efficiency, there fore it would have been obvious to one ordinary skill in the art to have fingers or distance between fingers be no wider than 8 mils. The same inventor Sano et al. US 20060038792 A1 discloses finger and distance be about 75 to 100



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microns pages 3 and 4, paragraphs 47-52). The reason to combine proper width of the finger will match driving requirements of the column and row electrodes defining interleaved combs fingers; so that number of fingers required to connecting pads required will be reduced.

Thus it is obvious to one in the ordinary skill in the art at the time of invention was made to incorporate teaching of Sano et al. (US 2003/0234773 A1) in teaching of Owens (5,953,199) modified by Yoshida et al. (4,071,785) to able to have a matrix touch panel proper width of the finger will match driving requirements of the column and row electrodes defining interleaved combs fingers; so that number of fingers required to connecting pads required will be reduced.

### ***Response to Arguments***

5. Applicant's arguments, see remark, filed 08-28-2008, with respect to the rejection(s) of claim(s) 1-7 and 9-12 under 35 USC 103(a) as being unpatentable over Owens (5,953,199) in view of Yoshida et al. (4,071,785) have been fully considered and are not persuasive.

6. Applicant's attorney challenges examiner to show support for the that "the piezoelectric material are well known to one ordinary skill in the art as transducer or sensor for touch pad sensors" and that "so the electrodes formed on the piezoelectric films are sensing electrodes".

7. Examine suggest to please see prior art of Woodmansee, Donald Ernest et al. (US 20010022406 A1 ) Touch sensing apparatus and method; page 3, paragraph 31 discloses the electrodes formed on the piezoelectric films are sensing electrodes. Please also see NN8905367 Pressure-Sensitive Cursor Control Keypads IBM Technical Disclosure Bulletin, May 1989.

8. Applicant's attorney challenges examiner to show support for claim that it is supposedly obvious to one ordinary skill in the art to able to have a matrix touch panel with piezoelectric

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film having side operating electrodes forming interleaved column and row sensing electrode in the comb shaped with at least two finger in the reduction of the operating point or contact point and having ground electrode on the second layer protecting against electrically noisy environments.

9. Examiner suggests please see prior art of Yoshida et al. (4,071,785) col. 3, Lines 1-67 discloses matrix organized with rows and columns of electrodes with ground layer as second layer and Col. 2, Lines 17-19 discloses it is absolutely advantageous to have comb shaped with at least two finger (please see figure 8 showing two fingers) arrangement of the electrodes to avoid every electrodes having their own pads at end of the PC board.

10. Examiner argues back as none of the independent claims recites the second layer **protecting against electrically noisy environments.**

11. Applicant argues prior art of Yoshida et al. (4,071,785) interleaved fingers of Figure 8 of Yoshida as supposedly to be combined with teachings of Yoshida at Column 3 and elsewhere. But the interleaved fingers of Figure 8 are something that Yoshida says is prior art that one should not do. Thus the reference teaches away.

12. Examiner disagrees and suggests please see Col. 2, Lines 14-19, discloses “However it is disadvantageous in that each of either the row or column electrodes in required to be connected to each operating point of a printed circuit board and **in that electrodes having a complex structure, such as comb shaped electrodes, are required**”.

***Conclusion***

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prabodh M. Dharia whose telephone number is 571-272-7668. The examiner can normally be reached on M-F 8AM to 5PM.

15. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

16. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR

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system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

/Prabodh M Dharia/

Primary Examiner

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November 29, 2008